

TRAFFIC SIGNAL MAINTENANCE SCOPE OF WORK

1. SERVICES

In general, the work to be done consists of providing preventative and routine traffic signal maintenance, emergency service, and to provide and maintain a maintenance and inventory management system for the maintenance of traffic signals within the City of Pleasanton. The contractor shall furnish all tools, equipment, apparatus, facilities, labor, services and materials, and perform all work necessary to maintain in good workmanlike manner all of the traffic signal systems owned or maintained by the City.

This work does not include street lighting but does include intersection safety lighting, where the safety lighting is on the same pole as the traffic signal or wired to the same electrical service cabinet as the traffic signal.

The Contractor shall have available and readily accessible all required tools, equipment, apparatus, facilities, and material to perform all work necessary to maintain the traffic signals and the traffic control devices listed in Exhibit A – Intersections and Exhibit B – Beacons & In-Pavement Lights in compliance with current Caltrans Standards Plans and Specifications. A copy of Exhibit A – Intersections and Exhibit B – Beacons & In-Pavement Lights is attached and incorporated by reference as though fully set forth herein.

A traffic signal system includes, but is not limited to: traffic signal controller and cabinet and all appurtenant equipment, service cabinet, flashing beacons related to traffic signal operations (i.e. advanced warning beacons), pedestrian and vehicle signals, detector systems, video detection camera systems, CCTV camera systems, wireless vehicle detection system, automated signal performance measures, interconnect cable (copper and fiber optic), wireless communications equipment, traffic signal communications equipment, emergency vehicle preemption system, uninterrupted power supply system, intersection safety lighting, internally illuminated street name signs, and blank-out LED signs related to the traffic signal.

Radar speed signs that are not operated as a component of a traffic signal system shall not be included in the preventative and routine maintenance of traffic signal systems.

The Contractor shall provide qualified personnel to perform regular preventive field maintenance and emergency repair for the traffic signals in the City. The work force of qualified employees shall be sufficient to respond to emergency calls and to promptly complete temporary and/or permanent repairs.

The Contractor shall provide a traffic signal technician with a minimum of three years experience in traffic signal repairs. The technician shall be familiar with Trafficware Commander, NAZTEC 980 and NAZTEC 2070 CONTROLLER systems, currently in operation in the City.

The Contractor shall provide a 24-hour service for knockdowns and other signal related emergencies. All personnel for Contractor that may be dispatched shall have continuous communication access through two-way radio, pager, and/or cellular phone. Response times are detailed in Section 3 of this document.

The Contractor shall provide adequate shop facilities, spare traffic signal components and a lab equipped to operationally test a complete Trafficware Commander, NAZTEC 980 or 2070 signal controller assembly for an extended period.

The Contractor shall furnish spare traffic signal controllers, detectors, conflict monitors, etc., when the original unit must be replaced or are in the laboratory for repairs.

The Contractor shall keep a large stock of common replacement components for a typical traffic signal system in the City. The replacement component types, quantities and storage location shall be adequate to meet the Emergency and Non-emergency Service time requirements detailed in Section 3 of this document.

The Contractor shall supply proper field equipment and tools with the technician at all times so he may sufficiently address any problem with the traffic signal as well as maintain communication with the City. This shall include, but not be limited to: PDA or Smartphone for uploading and downloading new service calls and service call completion, cell phones for communication with the City and a laptop computer with the appropriate hardware and software to configure, operate, or troubleshoot the traffic signal equipment.

The Contractor shall offer alternatives to the existing traffic signal equipment to meet the changing demand, when directed by City.

The Contractor shall cooperate with the City Traffic Engineering Division of the Community Development Department in recalibrating signal timing and progression. The Contractor shall not change signal timing except under the direction of the City Traffic Engineering Division of the Community Development Department.

The Contractor shall cooperate with the Police Department, Fire Department, Maintenance Department and other City departments in cases of emergency.

The Contractor shall refer all questions from the public not covered under this Agreement to either the City Traffic Engineering Division of the Community Development Department or the City Police Department.

2. PREVENTATIVE MAINTENANCE

The Contractor shall provide preventive maintenance services for the traffic signals listed in Exhibit A – Intersections and Exhibit B – Beacons & In-Pavement Lights. The Contractor shall provide and use a Preventive Maintenance Database checklist form to record inspection findings. Preventative Maintenance will include all maintenance activities identified in Attachment 4 – Preventative Maintenance Schedule. The Contractor shall provide a monthly update of the maintenance database to the City, and maintain a copy at the Contractor's office.

The contractor shall itemize each repair made as part of routine maintenance and recommend to the City additional work that may be needed and not covered in the Routine Maintenance Program.

2.1 Routine Maintenance

The Contractor shall perform a comprehensive signal maintenance program designed to eliminate or reduce traffic signal malfunctions, reduce signal operation complaints, and extend the useful life of the traffic signal equipment. This program shall include, but not be restricted to, Attachment 4 – Preventative Maintenance Schedule.

2.2 Traffic Signal Control Equipment

The Contractor shall repair or replace all defective parts of the traffic signal control equipment with like make and model parts for temporary and permanent replacements, except as individually agreed upon by City Traffic Engineering Division.

No permanent change of control mechanisms shall be done without prior approval of the City. Whenever equipment is removed from the controller cabinet, the City Traffic Engineering Division shall be notified by phone within 24 working hours.

Contractor agrees to notify the City Traffic Engineering Division in advance of any traffic signal turn-offs or turn-ons necessitated by Contractor's operations. Contractor shall not make said turn-off or turn-on without the approval of City Traffic Engineering Division.

All traffic signal controller equipment shall be maintained as recommended by the manufacturer.

The Contractor shall bear the full cost of repairing or replacing traffic signal components under the provisions of the routine maintenance program. When traffic signal components become obsolete or deteriorated to the point of being beyond repair, Contractor shall report such conditions to the City Traffic Engineering Division and provide satisfactory evidence that replacement is necessary. Contractor shall prepare an estimate showing the cost breakdown of material and labor for replacement of such equipment, and submit this information to the City Traffic Engineering Division.

2.3 Spare Equipment

The Contractor shall maintain adequate storage and shop repair facilities to perform the requirements of this Agreement, including a sufficient stock of spare parts, standby controllers and signal equipment to complete permanent repairs to the system within a thirty (30) day period. Failure to complete permanent repairs within this time limit may be sufficient cause for the City to authorize repairs to be completed by others. Repetitive failure shall be sufficient cause for the City to terminate this Agreement.

The Contractor shall be responsible for furnishing all spare standby controllers necessary to maintain the continued safe, efficient operation of the signal system when the original unit is withdrawn for maintenance, repair or modification. Standby controllers shall be fully compatible with the City's traffic control system without exception. All component parts (detectors, load switches, phones, lights, signal monitors, etc.) of each system shall be maintained at all times to perform the functions for which they were designed unless authorized to the contrary by the City Traffic Engineering Division.

2.4 Vehicle Signals

All new installed lamps SHALL BE LED and meet the most current Caltrans Standard Specifications and City of Pleasanton Specifications for vehicle signal faces and signal heads. The Contractor shall replace or repair vehicle signals as they malfunction. All labor resulting from replacing burned out, flickering, dim or otherwise non-functioning vehicle signal indications shall be replaced as part of the preventative maintenance flat rate.

2.5 New Traffic Signal Installations

Contractor shall maintain any additional traffic signals and appurtenant devices as they are installed, or become a part of the maintenance requirements of the City. Refer to Section 8 of this document for Compensation.

Prior to the turn-on of a new traffic signal or a traffic signal modification, Contractor shall perform an inspection of the traffic signal, monitor the flashing-out of the new signal heads, and review the new traffic control equipment operation prior to full activation of the new traffic signal system. Compensation will be per Section 8 of this document as Extra Work.

2.6 Pedestrian Signals

All new installed pedestrian signals SHALL BE LED COUNTDOWN FULL SYMBOL and meet the most current Caltrans Standard Specifications and the City of Pleasanton Specifications for pedestrian signals. The Contractor shall replace or repair pedestrian signals as they malfunction. All labor costs resulting from replacing burned out, flickering, dim or otherwise non-functioning pedestrian signal indications shall be replaced as part of the preventative maintenance flat rate.

2.7 Warranty Service

During the period of warranty, the Contractor is expected to make all communications between manufacturer, installing contractor and the City Traffic Engineering Division regarding any warranty service. Contractor shall notify the City Traffic Engineering Division of any undue delays in response by the manufacturer or installing Contractor and details of each incident.

2.8 Electronic Record System

The contractor shall supply and make operational a Windows-based computerized maintenance and inventory management system accessible by the City and Contractor via the Internet that at a minimum shall provide the following features:

Intersections – A complete database of signalized intersections including all routine maintenance histories, complete equipment inventory, electronic photo images, repair history and installation date of all equipment utilized at each location.

Assets – Asset inventory, maintenance/repair history and real-time available inventoried replacement parts, current status of reordered equipment and inventory tracking.

Preventative/Emergency Maintenance – A record of all calls, date and time stamp of: moment of receipt, dispatch, contractor arrival and departure. All records shall have description of problem and repair made. All records shall be updated in real time by the contractor via PDA or similar device and made available to City for real-time monitor of call status via the internet.

The maintenance and inventory management system shall incorporate a bar-code system for tracking equipment and activity. The contractor shall ensure that all new and replacement equipment has bar-code labels attached. The Contractor shall add new bar-code labels to all equipment that is currently unlabeled as part of preventative maintenance. At a minimum, the following traffic signal equipment shall be included in the bar-code system: Traffic Controller Cabinet, traffic signal controller, MMU, BIU, TS2 Cabinet power supply, video detection equipment detector amplifiers, CCTV cameras, communications equipment, and battery backup systems. All records shall be made available to City for real-time monitor/ lookup of data via the internet.

The Electronic Record Management system shall be fully operational within 60 days of award of contract. The City, at its option, may request minor revisions or changes to the system. These changes will be at no cost to the City. Upon completion of the contract, the City, at its option, may retain possession of the database for future use related to the City's traffic signal maintenance management inventory. This option shall be at no cost to the City.

If the contractor does not provide the computerized Electronic Record Management system within the first 90 days of this contract, the Contractor shall pay liquidated damages to the City in the amount of \$500 per calendar day until the system is fully operational.

3. EMERGENCY SERVICE

Throughout the term of this agreement, the Contractor shall provide and maintain emergency service response on a 24-hour, 365-day basis, including all holidays. All personnel for Contractor that may be dispatched shall have continuous communication access through two-way radio, pager, and/or cellular phone. The response time for initial evaluation, safety, and clean-up tasks is one (1) hour. The outside time limit for follow-up action is two (2) hours from notification. In cases of major malfunction and/or damage, the Contractor shall contact the City Traffic Engineering Division to receive further direction.

The Contractor shall respond within one (1) hour after the City has first notified the Contractor's representative of the following events:

- (1) Any signal controller malfunction
- (2) Signal equipment knockdowns
- (3) Other situations that are potentially hazardous to public safety

The replacement of burned-out lamps need not be on an emergency basis provided that there are two (2) remaining signal phase indications still in operation. Such replacements shall be completed within twenty-four (24) hours.

Contractor shall notify the City Traffic Engineering Division immediately of any change in traffic signal operations.

Emergency calls that require replacement of equipment will not require approval from City before such replacements are commenced.

Contractor shall maintain a single local telephone number where they can be reached twenty-four (24) hours per day. This telephone number shall be made available to all persons designated by the City.

The Contractor shall be responsible for responding to all emergency calls from persons designated by the City. Unless otherwise identified in this Scope of Work or the Agreement, all calls shall be included in the preventative maintenance flat rate, including all "false calls".

The City realizes that false calls occasionally occur outside of normal operating hours. The City also realizes that it is necessary to respond to all calls related to traffic signal malfunctions.

The Contractor shall be responsible for responding to ALL CALLS (including potentially false calls) from designated City officials. This service will be included in the monthly preventative maintenance costs.

3.1 Monitoring Emergency Calls

Upon completion of emergency work, the Contractor shall call the City Traffic Engineering Division to notify City staff that the emergency work has been completed.

3.2 Liquidated Damages

It is understood and agreed that failure on part of the Contractor to respond within one (1) hour, under normal conditions for emergency calls as provided in Section 3.0, will cause the City to suffer an unascertainable amount of damages. Contractor agrees to pay to the City, not as a penalty but as liquidated damages, the amount of \$100 per hour that the Contractor is late to arrive. This amount is to be deducted from any payment due or to become due to the Contractor.

3.3 Non-emergency Service

All other non-emergency calls shall be responded to within 24 hours or as mutually agreed upon between the City Traffic Engineering Division and Contractor for each individual service call.

4. SIGNAL UPGRADES AND INSTALLATIONS

The Contractor shall, if requested, install, modify and/or upgrade traffic signals, fiber or traffic safety devices. All additional work shall be performed to the satisfaction of the City Traffic Engineering Division.

No additional work shall be commenced or undertaken by Contractor without written approval by the City Traffic Engineering Division. Additional work shall be performed in accordance with the most current version of the California Manual of Uniform Traffic Control Devices, State of California Department of Transportation Standard Plans and Standard Specifications, and the City of Pleasanton Community Development Standard Specifications and Details. This work shall be performed within the time limit established by the City Traffic Engineering Division and at the mutually agreed upon price.

City shall retain the right to perform any additional work by use of City forces or, in the alternative, to advertise such work for bids.

5. RECORDS

5.1 Intersection Records

- (a) **Inventory List:** At each intersection, the Contractor shall maintain an inventory list for that intersection as outlined in the Section 2.8 Electronic Record System. This list shall be updated when components are changed during maintenance and shall be checked for accuracy on an annual basis. The inventory list shall include the model, manufacturer, serial number and quantity of each equipment. The inventory list shall be continually updated see Attachment 4 – Preventative Maintenance Schedule.
- (b) **Preventive Maintenance (PM) Checklist:** The Contractor shall create and provide a MS Access or approved equal database with data entry forms for the field technicians to use to log preventative maintenance and emergency call-out activity. The Contractor shall maintain this database for use by maintenance staff whenever they visit any signalized intersection. The Contractor shall also maintain a hardcopy of the Preventive Maintenance Checklist Form at each intersection. The PM checklist form in the cabinet shall be completely filled out. The database shall be accessible via a wireless PDA or similar technology so that the technician may update the database from the intersection. Every time the signal cabinet door is opened, the maintenance technician shall make an entry in the maintenance database regarding the purpose of the maintenance activity and operational status of the signal. The database forms shall be used by the maintenance staff to record each Preventative Maintenance inspection and any non-scheduled maintenance activity by the Contractor to repair an element of the traffic signal installation at the intersection (cabinet components, detector loops, pedestrian heads, signal heads, lenses, signal poles, etc.). The PM database shall be continually updated. The City shall have access to the database via the internet and an updated hard copy of the database furnished to the City Traffic Engineering Division monthly.

5.2 Monthly Activity Report

The Contractor shall provide a computerized monthly activity report to the City Traffic Engineering Division of the Community Development Department by the fifteenth day of each month for the previous month. The report shall be emailed or delivered on a CD in a Microsoft database format and shall include the following:

- a. Time the service calls were received by Contractor, City personnel making the call, time arrived at the intersection, the response time, the technician name, the number of hours spent for each repair and equipment replaced.
- b. A complete record of all work that was performed on the traffic signal equipment during the previous month including the make, model, and serial number of any major components or other equipment that was newly installed at each intersection. The disposition of removed signal control components and the repair history of reinstalled components shall be included in the monthly report.
- c. Time and date the PM work was performed.

If the contractor does not provide the computerized monthly activity report by the fifteenth day, the Contractor shall pay liquidated damages to the City in the amount of \$500 per calendar day until the report is submitted.

5.3 Pending Repair List

The Contractor shall provide a computerized monthly report, to the City Traffic Engineering Division of the Community Development Department by the fifteenth day of each month, of all pending repair work needed at each intersection. This report shall be broken down by intersection and be separate from the Monthly Activity Report.

If the contractor does not provide the computerized monthly activity report by the fifteenth day, the Contractor shall pay liquidated damages to the City in the amount of \$500 per calendar day until the report is submitted.

6. MEETINGS

The Contractor's technician shall be available to meet with the City Traffic Engineering Division on a weekly basis at a mutually agreed upon time and place in the City of Pleasanton to review each week's maintenance activities. The Contractor's maintenance supervisor shall be similarly available to meet with the City Traffic Engineering Division on a monthly basis.

7. KEY PERSONNEL

Any and all persons identified in this Agreement performing work hereunder are deemed by CITY to be key personnel whose services were a material inducement to CITY to enter into this Agreement, and without whose services CITY would not have entered into this Agreement. CONTRACTOR shall not remove, replace, substitute, or otherwise change any key personnel without the prior written consent of CITY.

8. COMPENSATION

8.1 Compensation for Routine Maintenance

In consideration of the furnishing by the Contractor of the described labor, services, materials and equipment in accordance with all provisions of this Agreement, together with the appurtenances thereto, said Contractor shall be paid by the City sum of \$_____ per maintained intersection and \$_____ per maintained beacon / in-pavement lights per month as the flat rate cost in accordance with Attachment 5 – “Proposal Price Comparison” – of the Request for Proposals, attached and incorporated by reference as though fully set forth herein.

In the event that new traffic signals are installed, the Contractor agrees to maintain these signals at the same flat rate and in the same manner as those covered by this Agreement upon written

notification from the City Traffic Engineering Division. In the event notification is made at other than the beginning of the monthly contract period, payment for that month shall be prorated on a daily basis.

The flat rate maintenance cost does not include new traffic signal poles, pedestrian push buttons, LED indications, traffic signal cabinet installation, service cabinet installation, testing traffic signal controller cabinets, installing video detection cameras and CCTV PTZ cameras, painting of poles, heads, cabinets or other devices, nor the repair or replacement cost of inductive loops, signs, electroliers, radar speed signs not associated with traffic signal operations, or repairs to signal equipment when such equipment has been damaged by vehicular collisions, acts of God, or malicious damage. All other work and repair required to maintain a fully operational traffic signal shall be considered to be included as part of the routine maintenance.

The maintenance of or replacement of inductive loop sensor units and amplifier units, load switches and other minor control components are included in the flat rate maintenance cost.

After hour, weekend and holiday calls shall be included in the flat rate maintenance cost, except in cases where necessary repair work results from vehicular collisions, acts of God, or malicious damage. Request for payment of this work shall be submitted to the City on a separate invoice.

It is the intent of this contract to contain all maintenance and repair costs within the month flat rate, with the exception of repair work resulting from vehicular collisions, acts of God, or malicious damage.

8.2 Compensation for Extra Work

The City shall pay for repairs under extra work when such repairs are made necessary due to damage to signals resulting from vehicular collisions, act of God, or malicious damage.

The City agrees to pay the Contractor the full amount of extra repairs in accordance with Attachment 5 – “Proposal Price Comparison” – of the Request for Proposals. The first two hours of Extra Work in response to calls for service received by Contractor between 7 AM and 4 PM on weekdays (non-holidays) shall be charged at the straight time rate (not overtime).

The Contractor shall contact the City Traffic Engineering Division to obtain prior approval before work is scheduled. The Contractor shall verify invoiced charges, when requested by City, with time cards and material invoices.

Repair or replacement of in-pavement loop vehicle detectors shall be considered extra work and shall require approval from the City Traffic Engineering Division prior to replacement.

Repair or replacement of equipment related to radar speed signs shall be considered extra work and shall require approval from the City Traffic Engineering Division prior to repair replacement. Payment shall be made on a time and materials basis.

MATERIAL ONLY required for the replacement of burned out, flickering, dim or otherwise non-functioning LED or incandescent vehicle and pedestrian signals shall be considered extra work.

9. CONTRACT TERM

The period of this Agreement for Contract Services shall extend from July 1, 2021 thru June 30, 2023.

If the Agreement is extended beyond June 30, 2023 per Section 3 of this document, the Contractor may request an adjustment of the flat rate, labor, and Equipment costs specified in Attachment 5 – “Proposal Price Comparison” – of the Request for Proposals. Changes in labor or equipment costs shall not exceed the change in the Consumer Price Index (CPI) since the immediately preceding amendment to such rates. The CPI to be used in rate adjustments shall be the all Urban Consumers (1982-84=100) for the San Francisco-Oakland-San Jose, California area as published by the United States Department of Labor, Bureau of Labor Statistics. The Contractor and the City's Community Development Director, may by mutual agreement, amend Attachment 5 – “Proposal Price Comparison” – of the Request for Proposals; provided, however, no more than one amendment may be made in each schedule in any calendar year. Increases due to the cost of Contractor's general liability insurance may be negotiated and approved by the City Community Development Director when said increases are properly documented by the Contractor.

Charges for extra work shall be consistent with Attachment 5 – “Proposal Price Comparison” – of the Request for Proposals.

10. CAPTIONS

The captions or headings in this exhibit are for convenience only and in no other way define, limit or describe the scope or intent of any provision or section of the agreement.